

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

**THE EFFECTS OF EXCLUSIVE TEAMING
ARRANGEMENTS ON THE DEPARTMENT OF DEFENSE
ACQUISITION PROCESS**

by

Robert R. Main

June 1999

Principal Advisor:
Associate Advisor:

Jeffrey R. Cuskey
David V. Lamm

Approved for public release; distribution is unlimited.

19990915 068

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE June 1999		3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE The Effects of Exclusive Teaming Arrangements on the Department of Defense Acquisition Process			5. FUNDING NUMBERS	
6. AUTHOR(S) Robert R. Main				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) The objective of this research is to assess the effects of the formation of exclusive teaming arrangements in industry on the Department of Defense (DoD) acquisition process. The data for this research were gathered by interviewing DoD and industry procurement officials and through written survey responses from DoD and industry. The thesis provides background of the policies and regulations that influence and control exclusive teaming arrangements. Additionally, this study examines the tension between competition and best value procurement policies and how they relate to the formation of exclusive teaming arrangements. The study identified the concerns, benefits and risks associated with exclusive teaming arrangements. Methods used for mitigation of these risks were also examined. The thesis concludes that exclusive teaming arrangements allow the defense industry to share the risks and the cost of capital associated with major defense programs. Furthermore, DoD must conduct extensive market research to ensure that competition in the Defense Industrial Base is maintained and the requirements of the end user are fulfilled.				
14. SUBJECT TERMS Exclusive Teaming Arrangements, Defense Industry, Competition			15. NUMBER OF PAGES 115	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 39-18

Approved for public release; distribution is unlimited

**THE EFFECTS OF EXCLUSIVE TEAMING ARRANGEMENTS ON
THE DEPARTMENT OF DEFENSE ACQUISITION PROCESS**

Robert R. Main
Lieutenant Commander, Supply Corps, United States Navy
B.S., Mankato State University, 1984

Submitted in partial fulfillment of the
Requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

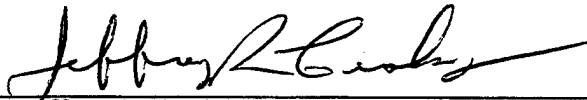
**NAVAL POSTGRADUATE SCHOOL
June 1999**

Author:



Robert R. Main

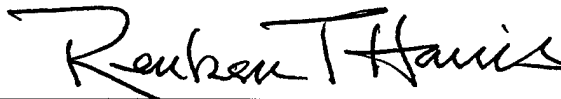
Approved by:



Jeffrey R. Cuskey, Principal Advisor



David V. Lamm, Associate Advisor



Reuben T. Harris, Chairman
Department of Systems Management

ABSTRACT

The objective of this research is to assess the effects of the formation of exclusive teaming arrangements in industry on the Department of Defense (DoD) acquisition process. The data for this research were gathered by interviewing DoD and industry procurement officials and through written survey responses from DoD and industry. The thesis provides background of the policies and regulations that influence and control exclusive teaming arrangements. Additionally, this study examines the tension between competition and best value procurement policies and how they relate to the formation of exclusive teaming arrangements. The study identified the concerns, benefits and risks associated with exclusive teaming arrangements. Methods used for mitigation of these risks were also examined. The thesis concludes that exclusive teaming arrangements allow the defense industry to share the risks and the cost of capital associated with major defense programs. Furthermore, DoD must conduct extensive market research to ensure that competition in the Defense Industrial Base is maintained and the requirements of the end user are fulfilled.

TABLE OF CONTENTS

I. INTRODUCTION.....	1
A.GENERAL.....	1
B.OBJECTIVES.....	3
C.SCOPE.....	4
D.RESEARCH QUESTIONS.....	5
E.ASSUMPTIONS AND LIMITATIONS.....	6
F.METHODOLOGY.....	6
G.THESIS ORGANIZATION.....	7
II. BACKGROUND AND LITERATURE REVIEW.....	9
A.INTRODUCTION.....	9
B.ISSUES.....	9
1.Competition.....	9
2.The Defense Budget.....	20
3.The Defense Industrial Base.....	22
C.CHAPTER SUMMARY.....	29
III. EXCLUSIVE TEAMING ARRANGEMENTS.....	31
A.INTRODUCTION.....	31
B.DEFINITIONS.....	31
C.OBJECTIVES.....	32

D.STRATEGIES USED TO ACHIEVE OBJECTIVES.....	33
E.CURRENT DOD POLICY.....	34
1.Federal Acquisition Regulation (FAR)	34
2.OUSD (A&T) Anticompetitive Teaming Memorandum.....	36
3.DCAA Anticompetitive Exclusive Teaming Arrangements Memorandum.....	39
4.DoD Directive 5000.1 & Instruction 5000.2-R.....	40
F.BENEFITS OF EXCLUSIVE TEAMING ARRANGEMENTS..	41
1.Reduced Costs	41
2.Competitive Advantage.....	42
3.Innovation.....	43
4.Management Practices.....	43
5.Stability.....	43
6.Tailoring.....	44
7.Preservation of the Defense Industrial Base.....	44
8.Political Support.....	45
G.RISKS OF EXCLUSIVE TEAMING ARRANGEMENTS.....	45
1.Reduced Competition.....	45
2.Compromise of Proprietary Information.....	46
3.Poor Performance by Team Member.....	46
4.Government Rejection as Anticompetitive...	47
5.Effective Teamwork.....	47
H.CHAPTER SUMMARY.....	47
IV.ANALYSIS	49
A.INTRODUCTION.....	49
B.COMPARATIVE ANALYSIS OF CONCERNS.....	49
C.COMPARATIVE ANALYSIS OF BENEFITS.....	56

D.COMPARATIVE ANALYSIS OF RISKS.....	63
E.COMPARATIVE ANALYSIS OF METHODS OF RISK MITIGATION.....	68
F.CHAPTER SUMMARY.....	76
V. CONCLUSIONS AND RECOMMENDATIONS.....	77
A.CONCLUSIONS.....	77
B.RECOMMENDATIONS.....	81
C.ANSWERS TO RESEARCH QUESTIONS.....	85
D.ADDITIONAL AREAS OF RESEARCH.....	94
APPENDIX.....	97
LIST OF REFERENCES.....	99
INITIAL DISTRIBUTION LIST.....	105

I. INTRODUCTION

A. GENERAL

One of the recent trends within the defense industry has been the formation of exclusive teaming arrangements--both vertical and horizontal--among companies competing for DoD business. As the defense industry has contracted in the Post-Cold War environment, there are growing concerns with regard to these teaming arrangements. In 1993, then Deputy Secretary of Defense William Perry informed executives from the defense industry that roughly half of them would soon be eliminated from the supplier base, due to reduced demand for their products. The Government let market forces determine the composition of the ensuing mergers. All mergers and acquisitions were allowed to take place until the proposed merger between Lockheed Martin and Northrop Grumman in March 1998. This merger was blocked because it would have resulted in just three huge firms--Boeing, Lockheed Martin

and Raytheon--receiving a substantial portion of what DoD spends annually to acquire its weapons and other products.

An exclusive teaming arrangement is defined as a teaming arrangement created when two or more companies agree to team together to pursue a DoD procurement program and further agree not to team with any other competitors for that program. [Ref. 1:p.1]

DoD's perceived concerns regarding exclusive teaming arrangements are that certain arrangements will negatively affect competition, cost and the size of the industrial base. The Government is concerned that a lack of competition will result in higher costs on procurement programs. Contractors will not have an incentive to provide a quality product at a reasonable price, since the Government will rely on them as the only source. Exclusive teaming arrangements can prevent otherwise viable competitors from having a realistic chance of participating in a DoD procurement program. Over time this could force viable firms to scale back on the amount of business they do with the DoD or even squeeze them out of the market place entirely.

The smaller number of firms competing for DoD business creates an environment where an exclusive teaming arrangement may eliminate competition and result in sole source procurements. The most prominent example of an exclusive teaming arrangement that eliminated competition in Government procurement was the DD-21 program. The Navy encountered problems when Bath Iron Works, Ingalls Shipbuilding and Lockheed Martin joined together to bid for the DD-21 program. [Ref. 2] This arrangement essentially reduced the pool of qualified contractors to one because another viable shipbuilder does not exist. Therefore other systems integrators, like Raytheon, do not have a shipbuilder to team with. In the end the Government required Bath Iron Works and Ingalls Shipbuilding to split up and team with either Lockheed Martin or Raytheon.

B. OBJECTIVES

The primary objective of this thesis is to determine DoD's experience with exclusive teaming arrangements and assess how this information might be used to improve the acquisition process.

Other objectives are to determine the benefits of teaming arrangements and provide ways to maximize these benefits. Also, to determine the risks associated with teaming arrangements and provide methods to mitigate these risks.

C. SCOPE

This thesis identifies the Government policies that affect exclusive teaming arrangements formed by the defense industry. The benefits of exclusive teaming arrangements are discussed as well as the risks associated with these arrangements. Both DoD and industry concerns regarding the use of exclusive teaming arrangements will be examined. This thesis will make an assessment of whether the use of exclusive teaming arrangements by industry is beneficial or if they pose threats to the business arrangements of DoD contracting officers and program managers. The information provided by this thesis will assist procurement officials who deal with exclusive teaming arrangements.

D. RESEARCH QUESTIONS

To achieve the objectives of this study, the primary research question was: What is DoD's experience with exclusive teaming arrangements and how might this information be used to improve the acquisition process? From the basic research question, the following subsidiary questions were developed:

1. What constitutes an "exclusive" teaming arrangement and what are the current DoD policies and regulations with respect to these type arrangements?
2. What are DoD's primary concerns with vertical and horizontal "exclusive" teaming arrangements?
3. What are industry's primary concerns with "exclusive" teaming arrangements and DoD's current "Anti-Competitive Teaming" policies?
4. What are the perceived benefits and risks associated with "exclusive" teaming arrangements?
5. How does DoD currently mitigate "exclusive" teaming arrangement risk and how might strategies be formulated to address these risks in future potential "exclusive" teaming arrangements?
6. How might current teaming regulations, policies and practices be changed to enhance the acquisition process?

E. ASSUMPTIONS AND LIMITATIONS

Two primary assumptions relevant to this study have been made. First, the reader has a basic knowledge of acquisition and contract management. Second, the literature reviewed for this study is complete and accurate as of the date of this study.

F. METHODOLOGY

The data for this study were obtained from several sources. First the researcher conducted an extensive review of available literature. This literature review consisted of a local library search, inter-library loans, use of CD-ROM systems, a custom search on LEXIS/NEXIS, and use of the Internet.

Secondly, a survey was developed by the researcher to gather information from both DoD and industry officials with regard to exclusive teaming arrangements.

Thirdly, several telephone and personal interviews were conducted with various individuals involved in DoD acquisition policy.

G. THESIS ORGANIZATION

This thesis consists of five chapters. This chapter provides the objectives, scope, and methodology for data collection. Chapter II addresses the topics of competition, the declining defense budget and consolidation of the defense industry. Chapter III discusses the exclusive teaming arrangements, the policies that affect these arrangements and the benefits and risks associated with them. This chapter also presents the information collected from Government and industry. Chapter IV provides analysis of the information collected in the previous chapter. Chapter V presents the thesis' summary, conclusions and recommendations, as well as areas for further research.

II. BACKGROUND AND LITERATURE REVIEW

A. INTRODUCTION

This chapter will provide background information on three topics: competition, the defense budget and the defense industrial base. The chapter begins with the definition of competition, a discussion of the benefits of competition and an examination of the Competition in Contracting Act of 1984. The next section of the chapter focuses on the defense budget, primarily to highlight the decline that DoD has experienced since the Cold War peak in 1985. The final section of this chapter will discuss the definition of the defense industrial base, examine its components, and identify benefits and costs associated with maintaining the defense industrial base.

B. ISSUES

1. Competition

What is competition? Why should we pursue competition in Department of Defense (DoD) procurement policy? A simple

definition of competition is that it is the "effort of two or more parties acting independently to secure the business of a third party by offering the most favorable terms."

[Ref. 3] Personal experience in purchasing goods-e.g., a new car- would offer a similar concept. In this case it is easy to see that the competition created when there is more than one auto dealer predicts a lower price or more features for the prospective buyer. Most people would agree that greater competition results in a better value for the consumer, and their practical experience supports this idea.

A perfectly competitive market is the ideal structure for the entire economy and leads to the optimal allocation of goods and resources for the consumer. There are five conditions required to attain a perfectly competitive market. First, no one individual buyer or seller can have a perceptible influence upon market price. Secondly, producers and consumers have perfect knowledge of events in the market. Third, the product is homogeneous and customers are indifferent between the products of the available suppliers. Fourth, producers act independently of each other and seek to maximize their individual profits and

consumers act similarly to maximize their utility from consumption. Finally, there are no barriers to the movement of goods or factors of production. Firms are free to enter or leave the market and provide the market whatever quantity they wish. [Ref. 4:p. 50]

Perfect competition and monopoly are at the opposite ends of the competition spectrum. Actual levels of competition fall somewhere between these two extremes. These levels of competition vary from market to market and from product to product. Obviously, perfect competition is not possible in all Government procurements, especially, large, complex major system acquisitions where there are very few suppliers. Although perfect competition may not be possible in all instances of Government procurement, a high degree of competition can be obtained by creating an environment where as many suppliers as possible are encouraged to participate. This may be accomplished by using broad, achievable specifications. This competition can prevent individual firms from affecting the price of a product. [Ref. 5:p. 183]

In addition to providing the Government the opportunity to procure goods at lower prices, competition also serves other valuable functions. Competitive forces also provide the benefits of promoting innovation and technical improvement, enhancing mobilization and industrial capability, controlling cost growth, and preserving the concept of "fairness" regarding the Federal procurement system. [Ref: 6:p. 14] For these reasons, competition has become a fundamental goal of an effective procurement system.

Competition in Contracting Act

The Competition in Contracting Act (CICA) of 1984 was written on the heels of numerous spare parts pricing scandals, which many thought indicative of greater problems in the Government procurement system. There was also a belief that increased competitive procedures could lead to savings of between 15 and 50 percent. CICA strived to inject greater competition into Federal procurements. [Ref. 7p. 11] By reducing the number of sole-source or non-competitive procurements, the benefits of increased competition were expected to ultimately result in greater

cost savings for the Government. Enacted during a time of dramatically increasing DoD budgets, CICA was also seen as a way to offset or reduce a growing problem with exorbitantly priced sole-source procurements.

During the 1970s and early 1980s, Congress became increasingly concerned with the steady trend toward an ever increasing percentage of "noncompetitive" procurements. The General Accounting Office (GAO) assessed DoD's use of competitive procurements in 1979, and concluded that 25 out of the 109 noncompetitive contract awards reviewed could have been awarded competitively. [Ref. 8:p. 12] A similar conclusion was reached in 1982, when GAO studied six civilian agencies and reported a failure to obtain competition on an estimated 40 percent of the sole-source contracts awarded. [Ref. 9:p. 5] These reports and Congressional hearings, conducted during the same timeperiod, only increased the call for greater competition in the Federal procurement system.

An overarching issue is the definition of "competition." Competition held different meanings for many members of Congress and for the public. [Ref. 10:p. 36]

Commonly, competition was equated with price competition, where essentially homogeneous products are simply differentiated by price. This definition was most often associated with formal advertising, where award was made to the lowest responsible bidder from a number of bidders offering the same basic product. [Ref. 11] In competitive negotiation, however, the award is based on the evaluation of a variety of competed factors, only one of which is price. Design or technical competition is also considered in determining contract award. [Ref. 11]

Unfortunately, when a member of Congress quoted a statistic concerning the lack of competition, the statistic was often doing just that: describing performance in formal advertising. For example, Senator Proxmire cited DoD's procurement for 1970 as a year where "only 11 percent is competitive." While true of DoD formal advertising, almost 43 percent of all contracts awarded that year were competitively acquired in the broader definition (competition in formal advertising or one of the evaluation factors in negotiation). [Ref. 12:p. 8] That said, DoD also held a liberal view of competition, characterizing anything

but sole-source procurements as competitively awarded. [Ref. 12:p. 7]

Regardless of the exact definition of competition, Congress and public perception held that Federal procurement was inefficient. The lack of "competition" was cited as the cause of cost overruns, exorbitantly priced common items, and the rapidly growing DoD budget. [Ref. 7:p 3] Since Congress held the principal view that greater competition equaled greater benefit, they resolved to boost competition in Federal procurement. As such, Congress mandated that CICA "establish an absolute preference for competition." [Ref. 6:p.17]

President Reagan signed CICA into law on July 18th 1984, as part of the Deficit Reduction Act, PL 98-369. Section 2721 of the legislation established the basic intent of the law: to use full and open competition to increase responsiveness and the capability of the industrial base, while reducing costs of procurement. [Ref.13:Sec. 2721] In its final form, CICA made a number of key changes to existing laws regarding competition. The following are the five major changes that are most relevant to this study:

First, it eliminated the preference for formal advertising-renamed sealed bidding by CICA-and put competitive negotiation on an equal level. Competitive procedures would now encompass both formal advertising and competitive negotiation, as long as the contract was entered into pursuant to full and open competition.

Second, CICA required the use of sealed bidding when the following four conditions were met: 1) adequate time, 2) awarded on price, 3) no need for discussions, and 4) expect more than one bid. If these conditions were not met, then competitively negotiated proposals should be requested.

Third, it eliminated the 17 exceptions to formal advertising and replaced them with seven exceptions to full and open competition. These seven exceptions required when "other than competitive procedures" were used, included: 1) only one source and no acceptable substitute product; 2) unusual and compelling urgency; 3) in order to maintain an industrial, engineering, research, or development capability; 4) based on international agreement; 5) authorized or specified by statute; 6) for national security; and 7) in the public interest. These seven exceptions, with

minor modification, continue to be the standard today for contracting by other than full and open competition.

Fourth, it allowed exclusion, based on certain factors of a particular source in order to establish or maintain an alternative source of supply. Similarly, it allowed for limited competition in certain instances involving small business concerns.

Finally, it required the executive agency to create a competition advocate position, and to submit an annual report concerning competition and competitive procurements.

[Ref. 13]

The purpose of CICA was to increase the actual proportion of competitively awarded contracts. Congress accomplished this by explicitly setting out the competitive award processes and then mandating an annual report of progress, forcing the Federal procurement system to focus on reducing noncompetitive buys. As the percentage of competitive purchases increased, cost savings and greater fairness for contractors were expected to naturally follow.

When debate began on CICA, the standard for competition was again a central topic. The Senate proposed that the

standard for competitive procedures meant solicitation "from more than one source that is capable of satisfying the needs of the agency." All other procedures would be "noncompetitive procedures." [Ref. 14:Sec. 303]

In contrast, the House proposed three levels of competition. First, "full and open" competition would be where "all qualified sources are allowed and encouraged to submit" bids or proposals, and each "bid or competitive proposal is fully evaluated by the executive agency in the selection of a contract recipient." It would also restrict contracting offices from entering into a contract until a "sufficient number" of bids or proposals were received "to ensure requirements are filled at the lowest possible price given" the acquisition. The second level of competition was that which was "less rigorous than full and open competition." This was where award would be made from a pool of a limited number of qualified sources-at least two or more- who would be permitted to submit offers. Finally, the third level was "noncompetitive," and described award "after receiving only one bid or proposal." [Ref. 15:Sec. 202]

The Congressional discussion and final decision concerning this issue is particularly revealing. Here, the House's strict definition of "full and open" won out over the Senate's less restrictive version of "more than one source." The House Committee on Government Operations provided the following insight into their reasoning:

...an acquisition is hardly competitive when it is limited to just two independent sources, since additional bidders are often available to meet a government requirement. Using the traditional view, an agency may select two of its favorite vendors and then assert that a "reasonable degree of competition" had been achieved. The Committee believes that full and open competition exists only when all vendors are allowed to compete in an agency acquisition. [Ref 16:p.16]

Notably, a cautionary view was also expressed concerning the impact of the full and open standard:

Competition is not a goal itself, but a means to the goal of efficient and economical procurements. Might the inflexible application of the means occasionally interfere with achievement of the goal? From the government's perspective, every procurement has two costs: the price of the item and the administrative costs related to the contract. If limiting competition on a particular contract increases the price of the item by a smaller amount than the decrease in administrative costs, wouldn't full and open competition result in a less efficient procurement? [Ref 16:p.64]

This statement serves as an early example of the concept of "best value" which is central to the acquisition reform of the 1990s.

In the end, the phrase "full and open" competition became the critical criterion for determining whether a purchase was made under competitive procedures. If full and open competition was present, then competition existed, whether the purchase was through sealed bidding or negotiation. CICA went on to say "full and open competition ...means that all responsible sources are permitted to submit sealed bids or competitive proposals on the procurement."

[Ref. 13:p. 21]

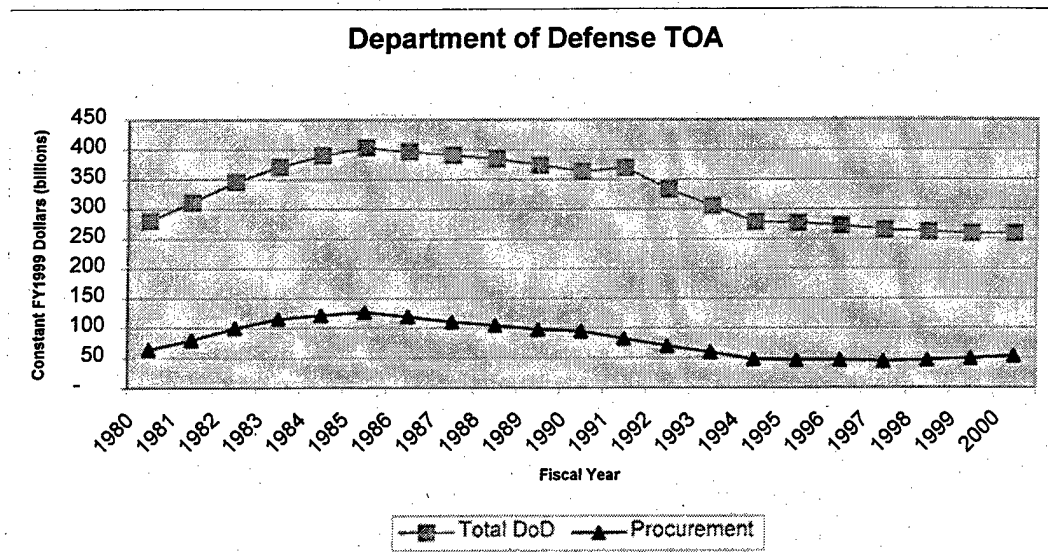
2. The Defense Budget

Victory in the Cold War has brought changes in the size and resources available to the Armed Forces of today. The DoD budgets have been declining since the mid-1980s peak in the Defense budget. The collapse of the Soviet Union, and resulting change in Defense policy has created a very different defense environment, and has had a significant impact on the range of public and private businesses,

departments or facilities that work in the interest of National Security.

Currently, the DoD is buying and developing fewer types of military systems and purchasing smaller quantities of the systems that are developed. The recent downturn in defense budgets is the fourth in 50 years. The three prior funding drawdowns came at the ends of World War II, the Korean War and the Vietnam War. This fourth one follows the peacetime defense buildup of the early 1980s. Looking specifically at the procurement budget, (which has been reduced even more dramatically than the overall defense budget) the period 1985-95 represents the longest consistent decline since the end of World War II. [Ref. 17:p.10]

Over the last decade defense procurement budgets have been reduced even more dramatically than the overall defense budget. The decline in the procurement budget is normally cited as the reason for the consolidation and merger of defense companies. Indeed there has been a 62 percent drop in the procurement budget from the peak of \$126.8 billion in 1985 (1999 dollars) to \$48.7 billion in 1999 as shown in Figure 2.1.



Source: Developed by the researcher using National Defense Budget Estimates for 1999.

Figure 2.1 Total DoD and Procurement Funding

3. The Defense Industrial Base

The defense industrial base (DIB) is defined as "the combination of people, institutions, technology, and production capacity used to develop and manufacture the weapons and supporting equipment needed to achieve our national security objectives." [Ref. 18:p. 3] The DIB is a subset of the larger national industrial base.

The DIB has many dimensions. It comprises contractors, subcontractors and parts suppliers, and it consists of companies that provide facilities supporting air, land, sea

and space systems. [Ref, 19:p.24] These facilities may be Government owned and operated, or privately owned and operated, or Government owned and privately operated. Many firms operate in multiple sectors of the base, either supplying more than one system or serving as both a prime and subcontractor on different contracts.

The DIB is not a single homogeneous entity and should not be treated as such. The multi-dimensional aspect of the DIB and the varying degrees of dependence on defense sales make the development of any broad DIB policy difficult.

The three components of the DIB are technology, production, and maintenance. The technology component includes private industry, university, and Government laboratories, research facilities, and test centers that conduct research. The production component consists of private and public manufacturing facilities, including Government-owned and Government-operated, Government-owned and contractor-operated, and contractor-owned and contractor-operated facilities. The maintenance component consists of private and Government facilities (such as

arsenals and depots) that maintain and repair equipment. [Ref. 18:p. 7]

There are several benefits to maintaining a defense industrial base. These benefits include security, capability, global strength, and domestic economics.

A strong industrial base can serve as a deterrent to potential adversaries. Gordon Boezer argued in an article titled "The Defense Technology and Industrial Base: Key Component of National Power," that there is a close relationship between national power and the nation's manufacturing capability. A vote on maintaining production potential can have a profound affect on perceived power. "As the period between crises increases, the industrial base grows cold from neglect and the risk to national security increases correspondingly." [Ref. 20:p. 27] The National Security Act of 1947 requires the National Security Council to:

...assess and appraise the objectives, commitments, and risks of the United States in relation to our actual and potential military power, in the interest of national security, for the purpose of making recommendations to the President in connection therewith. [Ref. 20:p. 27]

A domestic defense industrial base enables the Government to maintain a capability that it believes it will need in the future, and enables the Government to avoid the cost and time required to recreate it. The benefit to maintaining this capacity is that the nation would remain self-sufficient and will not be forced to rely on foreign sources that may not be reliable during times of conflict.

A country with a strong DIB can leverage that strength when dealing with foreign countries. A country with the ability to develop and produce the weapon systems required to meet its defense and national security requirements will be viewed as a global strength.

According to Sandler, a defense industrial base provides national economic benefits. [Ref. 15:p. 185] The benefits include the creation of jobs, technological advances, and export trade. This is a Keynesian outlook and ignores the fact that those same resources could possibly be used more efficiently in the private sector. When looking at the country as a whole, there is no evidence that money spent on defense creates more jobs or benefits the economy more than money spent in the private sector.

When you look at the jobs attributed to the procurement funding associated with the DIB, there are still more than 400,000 more defense contractor employees working in the U.S. industry today than were working at the low point of the Cold War defense budget in 1976. [Ref. 21:p. 14] However, according to the Aerospace Industry Association, aerospace employment nationwide has declined 41 percent since 1989. [Ref. 22:p. 212] It may be possible that the aerospace workers changed careers and took employment in private industry or are now employed in a field not categorized as aerospace.

There is a lack of quantitative data on the cost associated with maintaining a defense industrial base. The cost of maintaining national independence may be a lack of interoperability with foreign suppliers in an alliance. [Ref. 19:p. 185] The cost of maintaining a capability which a Government believes will be required in the future could be measured in the purchase of an item not necessarily needed for defense but purchased to keep a production line "warm." For example, the Bush Administration, with the concurrence of the Pentagon and the Senate Armed Services

Committee, proposed canceling the Seawolf submarine program. However, General Dynamic's Electric Boat Division and its subcontractors lobbied for the preservation of the program to maintain the capabilities needed to manufacture submarines and to preserve 25,000 related jobs. [Ref. 23:p. 15] In an article in the Washington Post, Senator John McCain stated "Lacking any mission to justify its cost, the Seawolf is really nothing more than a jobs program." [Ref. 24:p. A31]

The DoD has encouraged consolidation and mergers in the DIB. At a dinner, commonly referred to as the "Last Supper," with the executives from the defense industry in 1993, then Deputy Secretary of Defense William Perry informed those present that roughly half of them would soon be eliminated from the supplier base. [Ref. 22:p. 221] At the conclusion of World War II, the Pentagon purchased warplanes from twenty-six companies. Today the military has three companies to choose from: Lockheed Martin, Northrop Grumman or Boeing/McDonnell Douglas.

The Government let market forces determine the composition of the mergers, rather than directing the

mergers. On July 21, 1993, John M. Deutch, then Under Secretary of Defense for Acquisition and Technology, wrote a memorandum stating that restructuring costs are indeed allowable and thus reimbursable under Federal procurement law. This provided an added incentive to consolidate because the firms were allowed to charge the cost of reorganization as overhead to existing DoD contracts. Defense industry companies must prove that the Government received savings in the form of reduced costs in order to recoup consolidation costs. In April 1993, a GAO report found that this reimbursement policy has saved the DoD two dollars for every dollar it has spent. [Ref. 25:p. A15]

From 1992 to 1997, a total of \$55 billion in military industry mergers took place. [Ref. 26:p. 1] On July 1, 1997, The Federal Trade Commission approved Boeing's buyout of McDonnell Douglas Corporation and one day later, July 2, the U.S. Justice Department approved Raytheon Corporation's purchase of Texas Instruments' defense and electronics unit. On July 3, Lockheed Martin announced its merger with Northrop Grumman, a combination that would result in a

company with \$38 billion in revenue and 240,000 employees.

Defense Secretary William Perry stated:

We look at the proposed merger from the point of view of whether they are detrimental to our ability to maintain a competitive defense industry, and if and when that happens, we'll speak out to the Justice Department. So far, that hasn't happened." [Ref. 22:p. 213]

However, Secretary Perry's successor, William Cohen, was not as supportive of the consolidation. The Justice Department and Defense Department held meetings with Lockheed, after which Lockheed stated that the Government was "fundamentally opposed" to its planned merger with Northrop Grumman. [Ref. 26:p. 1] On March 23, 1998, the Department of Justice filed suit to block the acquisition of Northrop Grumman by Lockheed Martin. [Ref. 27:p. 11]

C. CHAPTER SUMMARY

This chapter provided three diverse topics. However, all of these topics are relevant and necessary to provide the reader with requisite knowledge to understand the environment in the defense industry. The first topic was the definition of competition and its benefits. Undoubtedly, there are many well-recognized benefits to

increased competition: lower prices, greater perception of fairness, and an expanded industrial base, to name a few. This chapter examined the legislative intent of policies regarding competition and CICA's mandate for full and open competition.

The second part of this chapter provided a brief overview of the declining overall defense and defense procurement budgets. This decline has resulted in many defense firms merging or acquiring other firms. The consolidation of the defense industry was an effort by firms to eliminate excess capacity and become more efficient.

The final section of this chapter discussed the definition of the defense industrial base, its components, benefits and costs associated with its maintenance. Recent events surrounding mergers and acquisitions were encouraged by DoD in order to benefit from cost savings. In the spring of 1998, DoD became concerned about a loss of competition in the industry, and no longer encouraged further consolidation. This concern lead to DoD blocking the attempted merger of Lockheed Martin and Northrop Grumman in 1998.

III. EXCLUSIVE TEAMING ARRANGEMENTS

A. INTRODUCTION

Chapter III defines and provides the reasons that industry forms exclusive teaming arrangements. Next, a discussion of the existing policies that influence exclusive teaming arrangements is provided. The benefits and risks associated with exclusive teaming arrangement as identified by Government and industry through interviews and survey responses are discussed.

B. DEFINITIONS OF EXCLUSIVE TEAMING ARRANGEMENTS

What is an exclusive teaming arrangement? In the context of DoD acquisition programs, an exclusive teaming arrangement is a business arrangement that is created when two or more companies agree to team together to pursue a DoD procurement program and further agree not to team with any other competitors for that program. These arrangements can be formed in a vertical or horizontal manner. A vertical teaming arrangement is an arrangement as defined above that

exists between prime contractor(s) and their sub-tier contractor(s) or suppliers. A horizontal teaming arrangement is an arrangement as defined above that exists between larger contractors that would normally be in competition for DoD procurement programs. [Ref. 1:p.1] A horizontal teaming arrangement may also involve large contractors that produce systems, products or that function as systems integrators for DoD procurement programs. The combined expertise and production capabilities of these large contractors may be required to develop and produce major weapon systems for the DoD.

C. OBJECTIVES OF EXCLUSIVE TEAMING ARRANGEMENTS

The objectives of exclusive teaming arrangements are to establish a competitive advantage, develop increased capabilities and remain in the defense market. First of all, exclusive teaming arrangements may be formed by industry with the goal of winning a particular DoD procurement program. These firms would seek to establish a competitive advantage that would result in the development of a winning proposal and the subsequent performance of the

contract. [Ref. 28] Secondly, exclusive teaming arrangements may be formed to develop increased or new capabilities that are necessary to provide innovative solutions to DoD requirements. Defense system requirements of today are often so complex that no single company can satisfy them all. This results in virtually all large Government programs going to teams of contractors with complimentary capabilities. Thirdly, a company may enter into an exclusive teaming arrangement simply to align themselves with others in the industry in an effort to remain a viable member of the defense industry.

D. STRATEGIES USED TO ACHIEVE OBJECTIVES

Industry may adopt several different strategies in their efforts to achieve these objectives. These strategies are the building of long-term strategic alliances, developing innovative solutions, and lowering life-cycle costs. [Ref. 29]

The building of long-term strategic alliances allows two or more companies to leverage their individual capabilities and expertise as well as share investment and

performance risks. Companies involved in such an alliance will become close partners over time and will become critical to each other's success.

Another strategy is to develop innovative solutions to fulfill DoD requirements. In today's technological environment, innovation is critical to the success of any industry. The defense industry looks increasingly to the commercial sector for technological advances. [Ref. 30:p.17]

Lowering the life-cycle costs of a weapon system is a strategy that has developed out of acquisition reform. In this era of shrinking requirements and a declining defense budget, DoD has become very concerned with the life-cycle costs associated with a weapon system.

E. CURRENT DOD POLICY

1. Federal Acquisition Regulation (FAR)

The FAR Subpart 9.6 provides guidance related to contractor teaming arrangements. Specifically in section 9.602 the FAR states:

- (a) Contractor team arrangements may be desirable from both a Government and industry standpoint in order to enable the companies involved to--

- (1) Complement each other's unique capabilities and
 - (2) Offer the Government the best combination of performance, cost, and delivery for the system or product being acquired.
- (b) Contractor team arrangements may be particularly appropriate in complex research and development acquisitions, but may be used in other appropriate acquisitions, including production. [Ref 11]

This regulation discusses the benefits associated with contractor teaming that may be realized for both the Government and industry. It also delineates limitations in section 9.604, specifically:

Nothing in this subpart authorizes contractor teaming arrangements in violation of antitrust statutes or limits the Government's right to--

- (a) Require consent to subcontracts;
- (b) Determine, on the basis of the stated contractor team arrangement, the responsibility of the prime contractor;
- (c) Provide to the prime contractor data rights owned or controlled by the Government;
- (d) Pursue its policies on competitive contracting, subcontracting, and component breakout after initial production or at any other time; and
- (e) Hold the prime contractor fully responsible for contract performance, regardless of any team arrangement between the prime contractor and its subcontractors. [Ref 11]

The treatment of this subject by the FAR appears to be balanced and complete. The issues of antitrust and pursuit

of competition policy are covered and there is no question of ambiguity.

2. OUSD (A&T) Anticompetitive Teaming Memorandum

Until January 5, 1999, the DoD had not issued specific guidance on exclusive teaming arrangements. On that date Dr. Gansler, Under Secretary of Defense (Acquisition & Technology) issued an Anticompetitive Teaming policy memorandum. The text of this memorandum is provided in the Appendix.

Dr. Gansler's primary concern was that the formation of exclusive teaming arrangements "have the potential of resulting in inadequate competition for our contracts."

[Ref. 1:p.1] Dr. Gansler's memorandum is specifically concerned with the preservation of adequate competition. It states, "While our preference is to allow the private sector to team and subcontract without DoD involvement, there are circumstances in which we must intervene to assure adequate competition. [Ref. 1:p.1]"

The memo discusses strategies for program managers and contracting officers to ensure that the Government obtains "robust competition." These strategies consist of early

notification (at pre-solicitation meetings and in Requests for Proposals) of potential contractors that any teaming arrangements will be "scrutinized for its potential to inhibit competition." [Ref. 1:p.1] This increased scrutiny may have a detrimental effect by reducing the willingness of some companies in the industry to compete for DoD contracts.

Examples of recent situations are included in the text of the memo. The first example revolves around the issue of unique capability. In this case, the program office required the dissolution of the exclusive teaming arrangement because other potential offerors considered one of the team members essential for successful performance. The second example is the DD-21 procurement. Initially, three companies, General Dynamics Corporation's Bath Iron Works; Litton Industries Ingalls Shipbuilding, Incorporated and Lockheed Martin Corporation's Government Electronics Systems unit established an exclusive teaming arrangement. This combination of these two shipbuilders and one systems integrator was considered to be a "dream team." [Ref, 2:p. 5] Raytheon Company complained that this team cornered the multibillion-dollar electronics/systems integration work on

this contract. DoD stepped in and directed Ingalls and Bath to form a second team with Raytheon and compete against Lockheed Martin. The third example provided in the memo resulted in the prevention of a sole-source situation where one systems engineering contractor who enjoyed a significant advantage in a potential competition was advised that it could only compete if it made its expertise available to other contractors, even if it participated on one "team."

[Ref. 1:p.1]

Dr. Gansler's memo also reviewed the technique of utilizing a "consent to subcontract" clause when the contracting officer considers it necessary. Subpart 44.2 of the Federal Acquisition Regulation (FAR) permits the inclusion of this clause when certain critical subcontracts require surveillance. The assurance of adequate competition at the subcontractor level is an issue the contracting officer should be concerned about.

Dr. Gansler announced a requested change to the FAR, specifically the list of practices that may evidence a violation of antitrust laws. The following practice will be added as evidence of an antitrust violation:

...exclusive teaming arrangements, if one or a combination of the companies participating on the team is the sole provider of a product or service that is essential for contract performance, if efforts to eliminate such arrangements are not successful. [Ref. 1:p.1]

3. DCAA Anticompetitive Exclusive Teaming Arrangements Memorandum

The Defense Contract Audit Agency issued a memo on 30 March 1999 on the subject of anticompetitive exclusive teaming arrangements. The memo provided direction to auditors in the following paragraph.

When auditing a contractor's records in accordance with Government auditing standards or providing financial advisory services, auditors may encounter or receive from other sources, information constituting evidence or causing suspicion of an exclusive teaming arrangement. Sources of information may include company employees, disgruntled participants, or others making allegations by letter, telephone, personal visit, or through a third party. If information received from any source indicates an exclusive teaming arrangement by a contractor, promptly notify the contracting officer. If contracting officer efforts to resolve an anticompetitive exclusive teaming arrangement are not successful, the auditor should follow the guidance contained in CAM 4-705 and promptly submit a referral using the procedures set forth in CAM 4-702.4. [Ref 31:p. 1]

This memo provides more evidence of DoD's concern regarding exclusive teaming arrangements that inhibit

competition. Contract Audit Manual (CAM) 4-705 provides guidance to DCAA auditors by identifying contractor actions that are considered anticompetitive procurement practices. CAM 4-702.4 provides the auditors with procedures for referring suspicion of fraud, corruption or unlawful activity relating to a Government contract.

4. DoD Directive 5000.1 & Instruction 5000.2-R

The March 15, 1996 revision of these documents incorporated the basic tenets of acquisition reform. Specifically, the reason for this revision is:

to define an acquisition environment that makes DoD the smartest, most responsive buyer of the best goods and services, that meet our warfighters' needs, at the best dollar value over the life of the product." [Ref. 32:p. 1]

While these documents do not specifically address the issue of exclusive teaming arrangements, the six themes that run throughout the documents do support acquisition reform. The six themes are 1) teamwork, 2) tailoring, 3) empowerment, 4) cost as an independent variable, 5) commercial products, and 6) best practices. [Ref. 31:p. 2] Two of these six themes, teamwork and best practices, support the use of teaming arrangements by industry.

Teamwork involving "all participants" on cross-functional teams is encouraged and seen as a tool to "maximize overall performance" and provides the highest opportunity for success of the program. This concept is applicable not only to relationships between Government and industry but also within industry itself. The avoidance of mandating Government unique oversight systems is one of the central issues associated with best practices. The Government must adopt "a simplified and flexible management process, modeled on sound business practices. These sound business practices must be taken into account when developing acquisition strategies and contract arrangements." [Ref. 32:p. 3]

F. BENEFITS OF EXCLUSIVE TEAMING ARRANGEMENTS

1. Reduced Costs

The formation of an exclusive teaming arrangement, either vertically or horizontally, will result in reduced cost to the Government. [Ref. 33] In a horizontal exclusive teaming arrangement, efficiencies gained by reducing excess capacity will improve both short term and long term productivity, which will reduce overall costs to all customers, including the DoD. Each team member will be

given responsibility to perform the functions that it does best. [Ref. 34] In a vertical exclusive teaming arrangement, many costs incurred at the subcontractor and supplier levels may be reduced due to the long-term commitment associated with the teaming arrangement. These cost include: recurring bid and proposal costs, reduced costs associated with economic order quantities, learning curve and possible level-line pricing agreements. [Ref. 35]

2. Competitive Advantage

Possibly the most obvious advantage from industry's point of view and the source of concern for DoD is the benefit of competitive advantage. [Ref. 29] Both horizontally and vertically, the companies involved in an exclusive teaming arrangement will seek to team with strong, financially secure, proven performers that provide additional capabilities. These firms seek to capitalize on the synergism of the respective technical and managerial skills of the team members. [Ref. 36] The name of the game is competition and these firms form teaming arrangements to win the Government contract.

3. Innovation

The combination of the various capabilities of the team members may lead to the development of a technically innovative idea or process that otherwise may not have been developed at that time. [Ref. 37] An innovative solution to a DoD requirement may be developed utilizing the integrated capabilities and the technical synergy of those companies involved in the teaming arrangement.

4. Management Practices

Companies involved in teaming arrangements have the advantage of being exposed to and learning the best management practices from other firms on the team. [Ref. 38] The team members may develop new managerial ideas or methods to improve the effectiveness of the team as a whole.

5. Stability

A firm's inclusion as a member of an exclusive teaming arrangement, may provide that company stability in the form of future production of its products or its association with an industry leader. [Ref. 35] If the team is successful, the long-term relationship that is formed, either vertically or horizontally, will provide the members with a more stable future in the industry. [Ref. 38]

6. Tailoring

The establishment of an exclusive teaming arrangement will allow the members to create a "virtual company." [Ref. 39] If the team were successful in winning the award of a major defense procurement program, that team would enjoy the potential to participate in future buys of the enhanced versions of the product or in the next phase of the program. Companies would be able to "tailor" the membership of a specific teaming arrangement to meet the requirements of a specific DoD procurement program. Companies at all levels, from prime to supplier, could be teammates on one program and competitors on another.

7. Preservation of the Defense Industrial Base

Teaming serves to preserve the industrial base for future competitions. After a winner take all competition, the unsuccessful offeror is likely to withdraw from that line of business. [Ref. 40] This would lead to a smaller number of firms competing in the market. If a teaming arrangement had been formed, the companies involved in that team would share the risk associated with pursuing the procurement. [Ref. 41]

8. Political Support

The establishment of multi-firm teams from different geographical locations may result in more Congressional support. [Ref. 35] Members of Congress play an active role by influencing what procurement programs are authorized and how much money is appropriated to those programs.

G. RISKS ASSOCIATED WITH EXCLUSIVE TEAMING ARRANGEMENTS

1. Reduced Competition

The problems that may be caused by the reduction in competition include: further shrinking of the industrial base, increased cost of procurement due to a lack of price competition, and a lack of innovation. [Ref. 42] The establishment of exclusive teaming arrangements may possibly create an actual or perceived "dream team" and effectively reduce the number of competitors by driving them away from the marketplace. [Ref. 33] Over time the reduction in competitors would lead to fewer firms and thus would, eventually, result in a sole-source situation.

2. Compromise of Proprietary Information

The sharing of proprietary information between teammates in an exclusive teaming arrangement is controlled by the use of "firewalls." [Ref. 43] These firewalls or barriers are put in place to prevent the transmission of unnecessary information to other members of the team. The idea is to share only the information necessary to perform the contract. Obviously, this information is shared only in an exclusive teaming arrangement. The number and complexity of the teaming arrangements that have developed in industry is making the design and control of these firewalls more and more difficult. [Ref. 43]

3. Poor Performance by Team Member

Companies involved in an exclusive teaming arrangement are exposed to the risk of non-award based on poor past performance of another team member. [Ref. 35] Another potential risk is that the teaming arrangement is only as strong as its weakest member and that "weak link" may result in inefficiencies. [Ref 36] This "weak link" problem could be a serious problem in both horizontal and vertical arrangements.

4. Government Rejection as Anticompetitive

From industry's point of view, the rejection of an exclusive teaming arrangement that is determined or perceived to be anticompetitive presents significant risk. [Ref. 44] The break-up of an already formed exclusive teaming arrangement by the Department of Justice, Federal Trade Commission, or DoD would cause several problems. [Ref. 45] The Government directed break-up of such arrangements inadvertently could result in technical leveling and transfusion. [Ref. 35] Also, a significant investment in time and money would be lost if the team were dismantled.

5. Effective Teamwork

The failure or inability of team members to work well together as a team would create problems for that team and may result in a significantly less efficient process. [Ref. 46] This inefficiency may impact innovation, schedule and would most likely create increased costs.

H. CHAPTER SUMMARY

This chapter has defined both vertical and horizontal exclusive teaming arrangements and discussed the reasons industry forms these teams. These objectives are to

establish a competitive advantage, develop increased capabilities and to remain in the market. It also explored the strategies utilized by industry to achieve these objectives.

The chapter also examined the current DoD policies regarding teaming arrangements. Policies do not uniformly support or oppose teaming arrangement, which creates some questions as to when DoD favors or discourages the use of teaming arrangements.

Lastly, the chapter presents benefits and risks associated with exclusive teaming arrangements as identified by DoD and industry procurement officials. The researcher collected these data through telephone and personal interviews and survey questionnaires.

IV. ANALYSIS

A. INTRODUCTION

This chapter provides an analysis of the concerns, benefits, risks and methods for risk mitigation associated with exclusive teaming arrangements between DoD and industry. To facilitate this analysis, the researcher will compare DoD's responses with those obtained from industry.

B. COMPARATIVE ANALYSIS OF CONCERNS

DoD concerns regarding exclusive teaming arrangements are loss of competition, increased costs, reduced innovation, and the size of the defense industrial base.

The reduction or elimination of competition that results from the formation of an exclusive teaming arrangement is the primary concern of DoD. The issue revolves around the formation of a team that possesses a competitive advantage so significant that other potential offerors will not enter into the competition because there appears to be little chance for them to win the contract

award. As this situation becomes more prevalent, fewer and fewer firms may participate as offerors on defense procurement programs. This decreases the number of companies that actively participate in the defense industry. These companies may simply leave the defense market and shift their focus to the commercial marketplace. DoD is concerned that this further reduction in firms actively involved in the defense industry eventually leads to an increase in sole-source procurements. This concern has developed because of the dramatic reduction in the defense industry that has occurred due to the decline in the defense budget since 1985.

DoD is also concerned about increased costs that are associated with reduced competition. As the number of firms actively involved in the defense industry becomes smaller, the incentive for those firms to reduce costs becomes less powerful. This longer-term viewpoint looks at the industry in the future and the possibility of a sole-source supplier or contractor defining the market and DoD paying for higher prices for required goods and services.

Reduced innovation is closely related to the issue of increased costs. The smaller the number of firms in the defense industry, the less important innovation becomes to those firms. The firms do not feel as much pressure to come up with an innovative idea to keep ahead of their competition. This may result in the stagnation of technology in the defense industry. One of the initiatives of acquisition reform is to rely on industry to come up with solutions to Governments needs. DoD is concerned that one remaining contractor will limit, not only its choice at the time of award, but also, the introduction of new and different approaches to fulfill their needs.

The size of the defense industrial base is an obvious issue and the reason that the other concerns exist. The decline in the defense budget and the corresponding reduction in demand for defense specific products have shaped the size of the industry. Until both the budget and demand increases significantly, the defense industry will be forced to trim excess capacity and increase efficiencies.

Industry concerns regarding exclusive teaming arrangements are Government break-up of team, protection of

proprietary information, insurmountable competition, lack of partners with which to team, and limitations imposed by arrangement.

Government break-up of an exclusive teaming arrangement is the primary concern of industry. The existence of this concern stems from the DD-21 program and the break-up of the "dream team." As these companies become larger and larger and the number of competitors become fewer and fewer, they must consider the potential for Government intervention. The transfer of technical data that occurs between team partners may end up damaging the competitive position of one of the companies if the team is broken-up. This may provide one or more firms with a technical transfusion and/or result in technical leveling between two or more companies in the same market. The bid and proposal costs associated with the team's proposal would be wasted if the team were broken-up. For these reasons, industry seeks informal approval of the teaming arrangement from Government before the firms are placed in a situation where technical data are shared or a significant amount of money is invested in developing a proposal.

The protection of proprietary information is a very important concern for industry. A firm's proprietary information is the basis for its competitive advantage. When companies enter into exclusive teaming arrangements, very complicated and well thought out "firewalls" are put in place. These "firewalls" are designed to allow the partners in a team to be able to access only information required for the specific proposal or project on which the team is collaborating. The development and establishment of these "firewalls" are the responsibility of each firm and they all take this function very seriously.

Firms within the defense industry are also concerned about insurmountable competition. If a firm is unable to compete because of an exclusive teaming arrangement formed by other companies, they are frozen out of the competition. In this era of reduced defense budgets, companies are seeking partners to team with in pursuit of the limited number of procurement programs. If a firm does not partner with strong teammates or tries to compete by itself, they may be at a disadvantage when compared to other competitors.

Lack of partners with which to team is another concern voiced by industry. Due to the smaller pool of defense contractors, firms are at risk of having no one with which to team unless they actively seek the formation of teaming arrangements. The use of exclusive teaming arrangements has increased as the industry has consolidated. The limited number of firms available in the defense industry makes the teaming decision very important. If a company does not form an alliance with others relatively quickly, there may not be any firms remaining with which to team. Firms are willing to share the prize of a contract award, because, through teaming, they are able to share the risk associated with the expanded use of performance specifications.

Industry is also concerned about the limitations imposed by an exclusive teaming arrangement. Some firms in industry showed reluctance to becoming involved in exclusive teaming arrangements because the firm's options become limited by the agreement. This is most notably the case at the component or sub-system level. For example, if a manufacturer of a sub-system or component enters into an exclusive agreement with a firm or group of firms and that

team is not awarded the contract, the demand for that sub-system or component evaporates. In this case, the manufacturer of that component or sub-system is better off not being exclusive with any team, but rather should offer its product to all competitors.

Table 1 presents the concerns regarding exclusive teaming arrangements of both DoD and industry.

TABLE 1

Concerns Regarding Exclusive Teaming Arrangements

Department of Defense	Industry
<ul style="list-style-type: none"> • Loss of Competition • Increased Costs • Reduced Innovation • Size of the Defense Industrial Base 	<ul style="list-style-type: none"> • Government Break-up • Proprietary Information • Insurmountable Competition • Lack of Partners • Limitations of Arrangement

Source: DoD and Industry Survey Response/Interviews

DoD's concerns are all related to the issue of competition, while industry is concerned about profit, unnecessary loss of proprietary data, as well as competition. The researcher believes that all of these concerns expressed by DoD and industry are valid and present risks to both groups. Competition is one of the cornerstones of Government acquisition. The lack of competition in industry causes DoD great concern. The other concerns raised by industry are also very important. The profit motive in industry pushes contractors to maximize their profits and minimize their costs. The Government break-up of a proposed teaming arrangement would be costly to the contractors involved and may result in the disclosure of proprietary information to the proposed teammates. Further analysis of the risks and methods used to mitigate those risks will be presented later in this chapter.

C. COMPARATIVE ANALYSIS OF BENEFITS

Benefits enjoyed by the DoD as a result of exclusive teaming arrangements are reduced costs, innovative

solutions, preservation of the defense industrial base, and political support from Congress.

Reduced costs obtained through the reduction of excess capacity provide a significant benefit for the DoD. The agreement reached by the members of an exclusive teaming arrangement specifically defines and delineates the responsibilities of each team member. The profit motive pushes this division of responsibilities to the most efficient level possible and the Government will benefit from this increased efficiency.

DoD benefits from the innovative solutions generated by the exclusive teaming arrangement. Members of the teaming arrangement bring their individual capabilities and ideas to the team. Company's individual capabilities and ideas are what make the concept of a teaming arrangement so effective. Members of an exclusive teaming arrangement will most likely possess complementary capabilities that enable the team to explore and develop new and innovation solutions to fulfill DoD requirements. This synergy of capabilities and ideas serves as a catalyst for innovation.

The existence of multiple firms in exclusive teaming arrangements in effect preserves the defense industrial base. The number of firms that are positively affected by the contract award is greater in a team environment than in a single firm competition. If DoD did not allow firms to form teams and a winner take all competition were conducted, the winning firm would be the only company to benefit from the Government contract. The non-selected firms would be forced to compete on other procurement programs, rely increasingly on the commercial sector, or abandon its efforts in the defense industry. If defense industry firms enter into multiple exclusive teaming arrangements with different companies, they will have a greater chance of winning contracts from the DoD and remain engaged in the defense industry.

Another benefit enjoyed by DoD is the increased political support from Congress for procurement programs that support multiple firms from multiple districts. Defense spending means jobs for the elected official's constituency and that Congressman will be supportive of

those procurement programs that have a positive economic effect on his or her district.

Benefits enjoyed by industry as a result of exclusive teaming arrangements are competitive advantage, reduced costs, innovative solutions, development of management practices, stability, tailoring, preservation of the defense industrial base, and political support from Congress.

The benefit of competitive advantage is very important to industry. Companies in the defense industry seek to team with financially secure, proven past performers, that bring new capabilities to the partnership. The degree of competitive advantage is crucial to both industry and DoD. If an exclusive teaming arrangement would enjoy a competitive advantage that is considered too significant for others in the industry to overcome, DoD would not support that team and consider it anticompetitive. It becomes vital for industry to predict just how much of a competitive advantage is too much and develop their teaming strategy in such a way to avoid Government intervention.

Cost reduction is another benefit enjoyed by industry. Through the formation of an exclusive teaming arrangement,

the team members will do that which it does best. This results in enhanced efficiency and economy in performance. Costs are also reduced as a result of economic order quantities and through efficiency brought about by "learning." From the vertical point of view, the prime contractor enjoys level-line pricing and the long-term relationship reduces recurring bid and proposal costs.

The creation of innovative solutions is one of the primary ways that a competitive advantage is gained. Members of an exclusive teaming arrangement bring unique technical capabilities to the team and a well-formed team capitalizes on the synergy created by the mixing of the technical expertise.

The management skills and strengths of the team members are shared to develop effective management practices. This benefits the team by making the organization more effective and efficient.

The formation of an exclusive teaming arrangement provides stability to the members because they will develop long-term business relationships while working on the procurement program. The members of an established team

feel more comfortable working with each other on future projects and so, they will benefit from the continued relationship in the future.

Since companies are looking to establish a competitive advantage, exclusive teaming arrangements may be tailored to a particular procurement. Firms look for specific capabilities in their teammates that help them win the contract award. This tailoring produces many situations where teammates on one project may be competitors on another procurement program. For example, Boeing McDonnell Douglas and Lockheed Martin are teammates on the F-22 procurement and, at the same time are competitors for the Joint Strike Fighter (JSF).

Industry enjoys the benefits of preservation of the defense industrial base and the political support from Congress for the same reasons as pointed out earlier during the discussion of the benefits to the DoD.

Table 2 presents the benefits associated with exclusive teaming arrangements of both DoD and industry.

TABLE 2

Benefits Associated with Exclusive Teaming Arrangements

Department of Defense	Industry
<ul style="list-style-type: none"> • Reduced Costs • Innovative Solutions • Preservation of the Defense Industrial Base • Political Support 	<ul style="list-style-type: none"> • Competitive Advantage • Reduced Costs • Innovative Solutions • Management Practices • Stability • Tailoring • Preservation of the Defense Industrial Base • Political Support

Source: DoD and Industry Survey Response/Interviews

The benefits identified by DoD were also pointed out by industry. The four benefits the two groups have in common benefit each group in different ways. To DoD reduced costs translate into a more affordable program while reduced costs mean greater efficiency for industry. Innovative solutions provide the DoD with higher performance, more reliable

defense hardware. Industry benefits from innovative solutions by gaining competitive advantage and establishing a reputation for excellence. The benefits of preservation of the Defense Industrial Base and increased political support provide both DoD and industry with viable futures in the procurement of weapon systems.

Industry identified the additional benefits of competitive advantage, management practices, stability and tailoring. The profit motive that exists in industry is the basis for these benefits. These benefits may result in increased market share, economies of scale, sharing of cost, schedule and performance risk, long-term strategic alliances, and reduction of excess capacity. All the benefits identified by DoD and industry are valid and do provide DoD and/or industry with tangible benefits.

D. COMPARATIVE ANALYSIS OF RISKS

Risks that DoD is exposed to as a result of exclusive teaming arrangements are reduced competition, increased costs, and lack of innovative solutions.

The risk of reduced competition due to the formation of exclusive teaming arrangements revolves around the issue of competitive advantage and insurmountable competition. If industry forms exclusive teaming arrangements that "freeze out" the competition and the other potential offerors choose not to submit a proposal, DoD is forced to deal with reduced competition.

The risk of increased costs for the DoD as a result of exclusive teaming arrangements occurs when and if there is a lack of adequate competition. If the DoD is placed in the position of making a sole-source procurement, whether a single firm or an exclusive teaming arrangement is involved, the Government must shoulder the risk associated with a lack of incentive for the contractor to reduce costs.

The risk associated with the lack of innovative solutions from the contractor also results from being forced into a sole-source procurement. This risk is parallel to the risk of increased costs.

Risks that industry is exposed to as a result of exclusive teaming arrangements are Government rejection as anticompetitive, compromise of proprietary information,

reduction of competition, poor performance by a team member, and lack of effective teamwork.

Industry faces the risk that the Government may break-up the exclusive teaming arrangement as was done in the DD-21 case. Industry now proceeds with caution when forming an exclusive teaming arrangement because they want to protect against the unnecessary disclosure of proprietary data and reduce the potential for lost bid and proposal costs.

The compromise of proprietary information is another risk for industry. The teaming agreement must be crafted in such a way to protect the unnecessary disclosure of any proprietary data that is not specifically related to the team's project.

Exclusive teaming arrangements have the potential to create an environment where there is less competition. If the teams are made up of many firms, there will be fewer teams and therefore less competition. Also, as stated before, if the industry leaders join up to form a "dream team" the others in the industry will not have the ability to compete with such a strong team.

Firms are also placed at risk due to their reliance on the performance of their teammates. If the performance of a team suffers because of the poor performance of one of the members, that poor performing member becomes a liability to the others and damages their reputations and potential for future contracts. This may also result in more internal disputes and finger pointing when contract performance begins to suffer.

Lack of effective teamwork is another type of risk. When two or more organizations combine their efforts on a project, there is the potential for the differences in the organizations to cause inefficiencies and/or result in less effective outcomes. The blending of two or more management systems may prove to be a daunting task and firms involved must treat this matter seriously to ensure the success of the teaming arrangement.

Table 3 presents the risks associated with exclusive teaming arrangements of both DoD and industry.

TABLE 3

Risks Associated with Exclusive Teaming Arrangements

Department of Defense	Industry
<ul style="list-style-type: none"> • Reduced Competition • Increased Costs • Lack of Innovative Solutions 	<ul style="list-style-type: none"> • Government Break-up • Proprietary Information • Reduced Competition • Poor Performance of Team Member • Lack of Effective Teamwork

Source: DoD and Industry Survey Response/Interviews

The only risk that was identified by both DoD and industry was reduced competition. This is the most significant risk from DoD's point of view because of the importance placed on competition. Industry views this risk from the lack of competitive advantage viewpoint, as in the case of trying to compete against a "dream team." The researcher believes all the other risks that were identified were valid, however, it is interesting that they are either DoD or industry specific. DoD sees the risks from a lack of

competition viewpoint where the risk exposures are higher costs and lack of an incentive for innovation. Industry on the other hand, is exposed to the risk of Government break-up of proposed teaming arrangements, which would result in the disclosure of proprietary information to firms that would no longer be part of the team. The other risks are associated with teamwork and the reliance on the performance of other members of the team. Industry sees all these risks as threats to profit and survivability in a declining market.

E. COMPARATIVE ANALYSIS OF METHODS OF RISK MITIGATION

Methods of risk mitigation used by the DoD are market research, mandating competition, communication, and development of effective acquisition plans and strategies.

The use of market research is a method for risk reduction used by the DoD. Understanding the market you are dealing with will provide the Government with much information regarding the products or services required. This information includes: who provides it, how much does it cost, what technology is involved, and what are the

alternative solutions. Effective market research is essential to the Government in understanding what is available and assists the program office in the early planning stages of the acquisition program.

DoD is controlled by regulatory devices that mandate competition in procurement programs. The Competition in Contracting Act (CICA) of 1984 allows unsuccessful contractors to protest if they consider the competition unfair and, the Sherman Anti-trust Act is designed to protect the competitive systems inherent in capitalism. These regulations reduce the risk associated with the award of a contract in an anticompetitive environment.

Open communication with the defense industry and potential offerors on a procurement program is a method used by DoD to gain insight on possible teaming arrangements. The use of presolicitation conferences and draft requests for proposals provides the Government with early indications of potential problems with exclusive teaming arrangements.

The development of effective acquisition plans and strategies are valuable tools that are used to mitigate risks associated with exclusive teaming arrangements. The

information gathered during market research assists the Government in developing acquisition plans and strategies that foster competition by encouraging industry to provide the best solution to fulfill DoD's needs. An effective acquisition plan must identify the milestones at which decisions must be made. The acquisition plan consists of the acquisition background and objectives and a plan of action. The acquisition background and objectives describes how several factors are considered in determining feasible alternatives. These factors include costs, performance, delivery, trade-offs, risks and efforts to streamline the process. The plan of action incorporates all the considerations that are vital to the program's success. Some of these considerations are sources, competition, source selection, budgeting and funding, contracting, logistics, make or buy decisions, and test and evaluation.

A vital consideration contained in the acquisition plan is the problems associated with incentivizing sole-source contractors or teams to control costs and develop innovative solutions to meet Government needs. There are several strategies or actions that will serve to mitigate this risk.

One strategy involves using earned value management as a means of cost, schedule and technical performance risk mitigation. This will provide insight to the contractor or team's performance and allow for the focusing of attention where it is needed.

The use of incentive and award fees are effective tools that are used to incentivize contractor performance. An incentive fee is used to motivate a contractor to earn more compensation by achieving better performance and by controlling costs. The incentive amount is determined by a specific formula based upon cost or performance objectives. An incentive fee is an effective method to achieve performance goals.

An award fee is used to place priority on the specific elements of the contract that the Government deems important and will pay an award fee. The award fee is subjective and is based upon after-the-fact evaluations to determine the amount of the award.

The establishment and tracking of key performance parameters developed from the Operational Requirements Document (ORD) will provide a tool that can be used to

incentivize the contractor or team to develop innovative solutions.

Another method of risk mitigation is the use of Cost as an Independent Variable (CAIV) which sets cost objectives that allow for the trade-off between cost, schedule and performance. CAIV is designed to expand the trading space between the threshold requirement and the objective. This allows for the incentivization of the contractor or team to reduce total life-cycle costs and thus, mitigates the risk of a cost overrun.

Methods of risk mitigation used by industry are careful selection of teaming partner, thorough review of proposed teaming agreements, creation of effective "firewalls" and, prior informal assurance that the Government will not break-up desired teams.

Careful selection of teaming partners is vital to the success of the exclusive teaming arrangement. A firm considers several factors when looking for a partner. These include past performance, financial health, reputation, assets and facilities, and management practices. Each firm involved in a teaming arrangement conducts a due diligence

inquiry to assess these very issues and attempts to determine the risks and benefits associated with an exclusive teaming arrangement.

The agreement itself is reviewed thoroughly and negotiated by each party in the teaming arrangement. Each company ensures the agreement is acceptable and serves the interests of their firm. Each company must be mindful of the requirements and limitation of the exclusive teaming arrangement.

The establishment of "firewalls" to protect proprietary information and data is widely used in industry. As the number of teaming arrangements increase, the complexity of the "firewalls" also increases. Members of an exclusive teaming arrangement on one project may be competitors on another project. These situations complicate the process of establishing the boundaries of the "firewalls."

The defense industry seeks early assurance from the Government that the teaming arrangement will not be viewed as anticompetitive. The antitrust issue is a showstopper and industry is very sensitive to this. Any informal indication of antitrust concerns from the Government will be

taken very seriously and may end the potential formation of an exclusive teaming arrangement.

Table 4 presents the risk mitigation methods associated with exclusive teaming arrangements of both DoD and industry.

TABLE 4

Risk Mitigation Methods Associated with Exclusive Teaming Arrangements

Department of Defense	Industry
<ul style="list-style-type: none">• Market Research• Mandating Competition• Communication• Effective Acquisition Plans and Strategies	<ul style="list-style-type: none">• Selection of Partner(s)• Review of Agreement• Effective "Firewalls"• Informal assurance from Government

Source: DoD and Industry Survey Response/Interviews

The methods for risk mitigation identified by DoD and industry are completely different. The motivations behind these methods are also different. DoD's goals are controlling the environment, gaining insight into the market, technology and contractors' operations, as well as

developing effective performance incentives. Industry serves the goals of self-interest and profitability.

By mandating competition, DoD controls the environment to gain the benefits associated with a competitive procurement. Market research, communication and developing effective acquisition plans and strategies are methods that involve significant effort and when properly combined with an incentive or award fee structure are effective ways to mitigate risk.

Industry's methods of risk mitigation can be placed under the heading of prudent business decisions. Obviously, the selection of teaming partners is critical to the success of the team and reviewing the proposed agreement only makes sense. The issue of safeguards for proprietary data and the use of "firewalls" becomes more and more complicated as the use of teaming arrangements becomes more prevalent. After the break-up of the "dream team," industry has sought informal Government assurances that proposed teaming arrangements will not be broken-up prior to extensive sharing of information and development of a proposal. Industry is seriously concerned about the technical leveling

and transfusion that may occur as a consequence of the break-up.

F. CHAPTER SUMMARY

This chapter provided an analysis of the data collected from interviews and survey responses. The concerns, benefits, risks and methods for risk mitigation associated with exclusive teaming arrangements were explored and the similarities and differences between DoD and industry responses examined. This comparative analysis was conducted to provide insight into the methods of risk mitigation and the motivations behind the use of those methods.

This chapter presents data collected from a survey, and an analysis of those survey data and the information presented in previous chapters. The survey was utilized to gather data from five major defense companies. The questions and data were grouped into four topic areas and analyzed along with other information presented in Chapters II and III.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

Since 1985, the DoD budget has sharply declined. This decline has translated into fewer DoD procurement dollars which in turn has affected the Defense Industrial Base. The large number of mergers and acquisitions has since slowed due to antitrust concerns voiced by DoD. Similarly, the reduced size of the Defense Industrial Base has recently caused concern in the area of exclusive teaming arrangements.

As a result of the research, the following conclusions have been drawn. Their sequence does not signify any order of priority or preference.

1. The formation of exclusive teaming arrangements allows the defense industry to share the cost of capital investment required for major defense programs.

Teaming is a common practice within the defense industry. Contractors look to teaming arrangements as a way to share risk and the extensive capital costs associated

with major defense programs. The use of exclusive teaming arrangements provides significant benefits to both DoD and industry. The defense industry has transitioned from one made up of many diversified defense contractors to one of a few highly focused companies. The complexity, cost and risk associated with today's major defense programs, combined with the limited size of the Defense Industrial Base point towards the expanded use of teaming arrangements.

2. It is too early to judge the full impact of the "Anticompetitive Teaming" policy memorandum.

It has been less than six months since the policy memo was issued and there have not been any cases of controversial exclusive teaming arrangements during this time period. Also, the FAR change requested by Dr. Gansler to include anticompetitive teaming as evidence of a violation of antitrust laws has not been implemented as of the date of this writing. The impact of this memorandum may increase when this change to the FAR is implemented.

3. The break-up of the DD-21 "dream team" sent a very strong signal to the defense industry.

The DoD intervention in the DD-21 procurement provided the defense industry with a very clear indication that the Government continues to be concerned about competition. This action has resulted in the defense industry seeking early indications from the DoD as to whether or not proposed teaming arrangements will be considered anticompetitive. As a strategy to reduce the possibility of unnecessary disclosure of proprietary data and expenditure of bid and proposal costs, the early informal approval or disapproval of the teaming arrangement has become increasingly important to industry.

4. Existing Antitrust legislation is adequate and provides sufficient oversight into exclusive teaming arrangements.

Teaming arrangements are not a newly invented concept. Contractors have been engaging in teaming arrangements for many years. While the use of teaming arrangements is increasing, the existing antitrust legislation has been proven to be effective and sufficient to regulate the formation of these arrangements. New policies or regulations will only serve to place more unique Government

requirements on industry and will negatively affect competition by providing industry another incentive not to do business with the Government.

5. DCAA involvement in the determination of the competitive nature of an exclusive teaming arrangement is unnecessary.

Involving a DCAA auditor in the process of determining whether an exclusive teaming arrangement is classified as anticompetitive appears to broaden the scope of responsibilities of the auditor. An exclusive teaming arrangement will be examined for the potential to be anticompetitive early in the acquisition process. Both DoD and industry have strong incentives to make this determination as early as possible. DoD does not want to jeopardize the program because of delays associated with recompeting the requirement or realigning contractor's teams in an effort to increase competition. Industry will seek early informal approval of any exclusive teaming arrangement as discussed earlier.

B. RECOMMENDATIONS

1. The Anticompetitive Teaming policy memorandum should be eliminated.

Dr. Gansler's policy memorandum does not provide any added value to the acquisition process. The impact on the issue of anticompetitive teaming came from the break-up of the DD-21 "Dream Team" last year. This action sent a much more powerful message to industry. Contracting offices within DoD also received the message that competition is still a cornerstone of acquisition policy. Current regulations including the FAR, DoD 5000 series and existing antitrust laws provide sufficient coverage to allow for the enforcement of anticompetitive behavior.

The requested change to the FAR list of practices that evidence a violation of antitrust is also not recommended. This issue is already addressed in FAR Part 9.604, limitations on contractor teaming arrangements.

2. DoD must conduct extensive market research.

Market research is necessary to determine information related to the availability of products, supplier capabilities, and business practices in industry. Market

research also provides access to the latest technology. The information gathered as a result of market research can be used to shape the acquisition plan and strategy, determine the requirements, performance specifications, requests for proposals, and contract terms.

The value of market research is tremendous when dealing with exclusive teaming arrangements. Technology and contractor capabilities are critical factors to consider when examining a teaming arrangement for anticompetitive practices.

3. Contracting Offices should address the risks presented by exclusive teaming arrangements in acquisition plans and strategies.

The information gathered through market research must be utilized to determine the risks that are presented by exclusive teaming arrangements. In the development of the acquisition plan and the acquisition strategy, specific concern must be emphasized surrounding the issue of competition. Realities of the marketplace must be reflected in the plan's treatment of the competition issue. The level of competition available in the market must determine the

strategy and approach that is taken in development of these planning documents.

The compilation of this information in an acquisition plan and an acquisition strategy will provide the program office with a clear roadmap that will identify the risks and provide effective tools to mitigate those risks.

4.DoD must capitalize on the synergy created by exclusive teaming arrangements.

The combination of the various capabilities of the contractors that are part of an exclusive teaming arrangement will provide the DoD with cost savings and innovation. The cost savings associated with the reduction of excess capacity, economies of scale and long term supplier/subcontractor relationships are significant. The Defense Budget may see modest increases in the near future, however, these increases will not fully fund the much needed modernization of defense hardware. DoD must take advantage of this savings potential to enable the DoD to leverage its buying power and work towards achieving the modernization goals.

The potential for the development of innovative solutions remains significant even though the Defense Industrial Base has shrunk. Global competition, as well as the significant competition among U.S. defense contractors fuels very aggressive efforts to create innovation. The global market has become more open and the defense industry sees that market as great potential for expansion of their business. DoD must engage the defense industry to tap into this innovation and realize its benefits.

5. Industry should seek early informal approval of proposed exclusive teaming arrangement.

Industry should continue to seek early informal approval of any proposed teaming arrangement before unnecessary disclosure of proprietary data occurs. This could become a serious problem for industry because Government intervention may result in technical leveling and transfusion. This would in effect level the playing field by creating competitors out of teammates.

Another problem created by Government intervention is the bid and proposal costs that would be wasted in a failed teaming arrangement. This hurts both industry and the DoD

because at least portions of those costs are going to show up as increased overhead on other Government contracts.

C. ANSWERS TO RESEARCH QUESTIONS

In order to accomplish the objectives of this study, the following research questions were pursued.

1. Primary Question: What is DoD's experience with exclusive teaming arrangements and how might this information be used to improve the acquisition process?

DoD's experience with exclusive teaming arrangements has been generally positive. DoD has enjoyed reduced costs due to the trimming of excess capacity and economic order quantities. Teams made up of contractors with complementary capabilities have developed innovative solutions to fulfill DoD requirements. Also, teaming arrangements have served to enable more contractors to remain in the Defense Industrial Base because of the capital and risk sharing features of these arrangements.

Problems with exclusive teaming arrangements are infrequent. Most notably, the DD-21 "Dream Team" break-up in March 1998 was the first large-scale evidence of an

antitrust problem with exclusive teaming arrangements. The Government's action of requiring competition for this program sent a strong message to industry and procurement officials within DoD.

Market research is vital to the success of any procurement program. Understanding the market, including the capabilities of the potential contractors, the technology available and the alternative solutions to fulfill the requirement is the only way for the DoD to guarantee program success. The acquisition professional must apply the data gathered through market research and develop acquisition plans and strategies that are tailored to the program requirements. This is how the acquisition process will be improved.

2. Secondary Question 1: What constitutes an "exclusive" teaming arrangement and what are the current DoD policies and regulations with respect to these type arrangements?

Exclusive teaming arrangement is a teaming arrangement created when two or more companies agree to team together to pursue a DoD procurement program and further agree not to

team with any other competitors for that program. This arrangement may be formed vertically, in the case of prime and sub-tier contractors, or horizontally, between two large contractors normally engaged in competition.

Currently, DoD policy sends mixed signals to industry regarding the desirability of exclusive teaming arrangements. The DoD 5000 series encourages the use of teaming as one of the six themes contained in that document. FAR coverage in Subpart 9.6 provides guidance that neither discourages or encourages the use of exclusive teaming arrangements. The newest policy statements issued by OUSD (A&T) and DCAA focus on anticompetitive teaming and discourages industry by seeking to tighten up the regulations with regard to exclusive teaming arrangements.

3. Secondary Question 2: What are DoD's primary concerns with vertical and horizontal "exclusive" teaming arrangements?

DoD's primary concerns with vertical and horizontal exclusive teaming arrangements are loss or reduction of competition. Competition could be eliminated if the most powerful and capable contractors were allowed to form an

exclusive teaming arrangement, one in which the other contractor or team of contractors would be able to outperform. DoD is concerned that this quasi-monopoly situation would lead to increased costs to the Government and reduces their motivation to provide innovative solutions. Another concern is the size of the defense industrial base. If this situation occurred many defense firms would be forced into other markets and the defense industrial base would be left with a few enormous firms.

3. Secondary Question 3: What are industry's primary concerns with "exclusive" teaming arrangements and DoD's current "Anticompetitive Teaming" policies?

Industry's primary concerns with exclusive teaming arrangements are the potential break-up of the team by the Government. This can be very disruptive and may cause problems for the contractors in their efforts to regroup at a late stage in the program and compete effectively. Protection of proprietary information presents considerable risk to contractors in an exclusive teaming arrangement. Disclosure, either inadvertent or as a result of a disestablished teaming arrangement, may result in technical

leveling and transfusion which would diminish one's competitive advantage. Lack of partners with which to team is a concern for industry in today's shrinking defense industrial base. If there are no remaining potential partners, with which to team, a contractor may be shut out by insurmountable competition. The limitations and restrictions imposed by a teaming arrangement may constrain a company's options when dealing with others in the defense industry.

4. Secondary Question 4: What are the perceived benefits and risks associated with "exclusive" teaming arrangements?

DOD feels the benefits associated with exclusive teaming arrangements are reduced costs, resulting from the reduction of excess capacity, and savings related to the building of a long-term relationship between team members. DoD also benefits from innovative solutions developed through the synergy created by the cooperative efforts of those companies involved in the teaming arrangement. The formation of exclusive teaming arrangements serves to preserve the defense industrial base by avoiding the winner-

take-all situation in which one contractor takes the prize and the others are forced to try again. In this era of lean defense budgets, the next opportunity may be too far away for those companies to stay in the defense industry. An important benefit is the political support from Congress. The support for a program is increased when the contractors are from different geographical areas and their involvement in the program brings with it the support of their Senators and Congressional Representatives.

Industry states the benefits associated with exclusive teaming arrangements are creating a competitive advantage and the reduction of costs. The development of innovative solutions and effective management practices are also identified as benefits. Other benefits are the stability associated with a long-term relationship and the flexibility provided by the tailoring of the team to the requirements of the procurement. Industry also realizes the benefits associated with the preservation of the defense industrial base, and additional political support from Congress.

DoD identified reduced competition, increased costs over the long run and lack of an incentive to develop

innovative solutions as the risk associated with the formation of exclusive teaming arrangements.

The primary risk that industry is exposed to as a result of exclusive teaming arrangements is Government rejection as anticompetitive. The potential for compromise of proprietary information and the reduction of competition due to a lack of potential partner with which to team are also identified as risks to industry. Industry also states that poor performance by a team member and lack of effective teamwork presents potential risks to their organizations.

5. Secondary Question 5: How does DoD currently mitigate "exclusive" teaming arrangement risk and how might strategies be formulated to address these risks in future potential "exclusive" teaming arrangements?

Methods of risk mitigation currently used by the DoD are mandating competition, market research, communication, and development of effective acquisition plans and strategies. The DoD currently mandates competition in Government contracting, unless competition is not readily available. Competition is one of the cornerstones of Government procurement and will remain so in the future.

Strategies involving increased market research and communication will be necessary to mitigate the risks associated with future potential exclusive teaming arrangements. DoD must become a better informed buyer of goods and services through engagement with industry. Awareness of defense and commercial markets as well as understanding the available technology are keys to effective risk mitigation. This awareness gained through market research will provide the necessary insight needed to develop effective acquisition plans and strategies. The acquisition plan and acquisition strategy provides the foundation for successful procurement programs.

6. Secondary Question 6: How might current teaming regulations, policies and practices be changed to enhance the acquisition process?

Current regulations and policies contained in the FAR and DOD 5000 series provide effective guidance to Program Managers and Contracting Officers dealing with exclusive teaming arrangements formed by industry. The researcher believes these regulations should not be changed. However, the Anticompetitive Teaming policy memorandum provides

additional and unnecessary coverage of the issue of maintaining competition in industry. Industry does not see this policy as a significant change; the action of breaking up the "dream team" had a much more significant impact. It is too early to assess the full impact of Dr. Gansler's memo.

The recent DCAA memorandum directing auditors to be on the lookout for anticompetitive teaming has generated significant interest in industry. The issue is whether the function of looking for evidence of an anticompetitive exclusive teaming arrangement goes beyond the charter of a DCAA auditor. Industry points out that the time and money spent defending and refuting an erroneous presumption of wrongdoing would eliminate the savings associated with teaming arrangements. This memorandum was issued on March 30, 1999, so its impact is unknown at this early date.

The keys to effectiveness when dealing with exclusive teaming arrangements are the practices utilized by the program office to mitigate the risks associated with these arrangements. Thorough market research and the application of those data when carefully crafting acquisition plans and

acquisition strategies will serve to enhance the acquisition process. Additional regulations or policies only place additional restrictions on industry and do not improve the process.

D. ADDITIONAL AREAS OF RESEARCH

This thesis identified areas that merit additional research, but did not address them because they are beyond the scope of this study. These areas are:

1. To what extent are international firms involved in exclusive teaming arrangements with U.S. defense contractors?
2. What impact will further mergers and acquisitions in the U.S. Defense Industrial Base have on the formation of exclusive teaming arrangements in the future?
3. Conduct a study of vertical exclusive teaming arrangements that focuses on DoD visibility over contractual relationships below the prime contractor level.
4. What lessons can be learned from examining a specific case (possibly a future case study on DD-21) from

concept exploration to contract completion in order to
document the entire process?

APPENDIX

Text of memorandum issued and signed by J. S. Gansler (USD A&T)
on January 5, 1999

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
ATTENTION: SERVICE ACQUISITION EXECUTIVES
DIRECTORS OF DEFENSE AGENCIES
DIRECTOR, DEFENSE PROCUREMENT

SUBJECT: Anticompetitive Teaming

As a result of the consolidation of the defense industry, increasingly we are seeing exclusive teaming arrangements--both vertical and horizontal--among companies competing for Department of Defense (DoD) business. An exclusive teaming arrangement is created when two or more companies agree--in writing, through "understandings," or by any other means--to team together to pursue a DoD procurement program, and further agree not to team with any other competitors for that program. These teaming arrangements have the potential of resulting in inadequate competition for our contracts. While our preference is to allow the private sector to team and subcontract without DoD involvement, there are circumstances in which we must intervene to assure adequate competition.

In the development of acquisition strategies, program managers and contracting officers should consider ways to assure that we obtain robust competition. At information meeting with potential competitors or in Requests for Proposals, companies should be advised that any pre-established teaming, at either the prime or subcontract level, will be scrutinized for its potential to inhibit competition. If exclusive teaming arrangements are anticompetitive, they can be addressed without a major expenditure of resources or oversight of company practices. For example, in one DoD competition, one company attempted to team exclusively with another company that other potential offerors considered essential for performance. The program office required the dissolution of the arrangement. If a team member has a unique capability that must be included in the system being purchased, DoD can insist that the company make that capability available on equitable terms to all system competitors. On the DD 21 program, exclusive teaming among three companies was rejected by DoD. As a result, two competitive teams--of

shipbuilders and integrators--were created by industry. On another program, DoD prevented a sole source situation where, because of its preeminence as a systems engineering contractor for several years, one company had a substantial advantage in a possible competition. That company was advised it could only compete if it made its expertise available to other contractors, even if it primarily participated on only one "team".

Another technique to provide for adequate competition at the subcontract level for a particular component or subsystem, is to include a "consent to subcontract" clause when a contracting officer considers it necessary. Subpart 44.2 of the Federal Acquisition Regulation (FAR) already permits inclusion of such a provision when certain critical subcontracts require special surveillance. Even when a "consent to subcontract" provision is used, the government should oversee the contractor's source selection process only to assure that a fair competition is conducted, not to act as a surrogate source selection official or to give approval of the selection of a particular source.

Because use of a tailored acquisition strategy or the "consent to subcontract" provision may not always be effective in providing for strong, credible competition in all critical areas, I am also requesting a change to the FAR. This change will add the following to the list of practices at FAR 3.303 (c) that may evidence a violation of anti-trust laws: "exclusive teaming arrangements, if one or a combination of the companies participating on the team is the sole provider of a product or service that is essential for contract performance, if efforts to eliminate such arrangements are not successful."

It must be understood that teaming involves significantly different issues than those that arise from mergers and acquisition, where the government's options may be more limited. With teaming, the government can, on a case by case basis, take a variety of actions in the formulation of acquisition strategies and in regulation to prevent anticompetitive teaming. In this era of downsizing of the defense industry, we must make every effort to achieve robust competition at all contract levels to ensure we continue to obtain the best products at reasonable prices to satisfy defense needs

/signed/
J. S. Gansler

LIST OF REFERENCES

1. Gansler, Jacques S. "Anticompetitive Teaming," Under Secretary of Defense, Acquisition and Technology Policy Memorandum. January 5, 1999.
2. Capaccio, Tony, "Pentagon Bans Contractor 'Dream Teams'," Defense Week, March 15, 1999, p.5.
3. "Competition." Websters New Collegiate Dictionary, 1981.
4. Burke, Terry, Angela Genn-Bash, and Brian Haines, Competition in Theory and Practice, Routledge, Chapman and Hall, Inc., 1991.
5. Washington, William N., "A Review of the Literature: Competition Versus Sole-source Procurements." Acquisition Review Quarterly, Spring 1997, pp.173-185.
6. U.S. Congress. Senate. Committee on Governmental Affairs. Legislative History, Public Law 98-369, Report 98-50, 1983.
7. U.S. General Accounting Office. Federal Regulations need to be revised to fully realize the purpose of the Competition in Contracting Act, 1985.
8. U.S. General Accounting Office. DoD loses many competitive procurement opportunities, 1981.
9. U.S. General Accounting Office. Less sole source, more competition needed in Federal Civil Agencies, 1982.
10. Peterson, Blair A. "The influence of the Competition in Contracting Act (CICA) on the volume of competitive prime contract awards for major hard goods and non-major hard goods purchased by the Department of Defense." Doctoral Thesis, George Washington University, Washington, D.C., 1988.

11. Federal Acquisition Regulation. (FAR) Defense Acquisition Deskbook. March 1999
12. Rich, Michael D. "Competition in the Acquisition of Major Weapon Systems," Legislative Perspectives, RAND Corporation, Santa Monica, CA, 1976.
13. Competition in Contracting Act. U.S. Code, 1984.
14. U.S. Congress. Senate. Competition in Contracting Act, S 338, GPO Washington, D.C., 1983.
15. U.S. Congress. House. Competition in Contracting Act, HR 5184, GPO Washington, D.C., 1984.
16. U.S. Congress. House. Committee on Government Operations. Competition in Contracting Act of 1984: Report together with separate and dissenting views on HR 5184, Report 98-1157, GPO Washington, D.C., 10 October 1984..
17. U.S. General Accounting Office. Defense Industry: Trends in DoD Spending, Industrial Productivity, and Competition. GAO/PEMD-97-3, Washington, D.C.: GPO, January 31, 1997.
18. Department of Defense, Inspector General Report. Defense Industrial Base Policies and Procedures. 1995.
19. Sandler, Todd, and Keith Hartley, The Economics of Defense, Cambridge University Press: New York, NY, 1995.
20. Boezer, Gordon, Ivars Gutmanis, and Joseph E. Muckerman II, "The Defense Technology and Industrial Base: Key Component of National Power," Parameters, Vol. 27, No.2, Summer 1997, pp.26-50.
21. Sapolsky, Harvey M., "Defense Over-Capacity," The Financial Times Limited, London Edition, November 14, 1997, p.14.

22. Kitfield, James, "Our Shrinking Arsenal," National Journal, pp,210-214, February 1, 1997.
23. Peatman, Bill, "Defense Addiction: Can America Kick the Habit?" National Catholic Reporter, No. 31, Vol 33, June 6, 1997, p.15.
24. McCain, John, "Defense Pork," The Washington Post, October 26,1995, p.A31.
25. Goure, Dan, and David Earnest, "Sweetener for Tighter Defense Industries," The Washington Times, July 15,1997, p. A15.
26. Pollack, Andrew, "Two Arms Makers Suddenly Face Antitrust Snag," NY Times, March 10,1998, p.1.
27. U.S. General Accounting Office. Defense Industry: Consolidation and Options for Preserving Competition. GAO/NSIAD-98-141, Washington, D.C.: GPO, April, 1998.
28. DeMayo, Peter, Lockheed Martin Corporation, Vice-President of Contract Policy, Interview granted, May 7, 1999.
29. Callan, John, Lockheed Martin Missiles and Space, Director of Contracts, Interview granted May 14, 1999.
30. Center for Strategic & International Studies. Defense Restructuring and the Future of the U.S. Defense Industrial Base. Washington D.C., March 1998.
31. Uhlfelder, Lawrence P. "Anticompetitive Exclusive Teaming Arrangements", Defense Contract Audit Agency Memorandum, March 30, 1999.
32. Department of Defense, Office of the Under Secretary of Defense (Acquisition and Technology). Defense Acquisition, DoDD 5000.1. Washington D.C. GPO, March 15, 1996.

33. Stiller, Allison, Assistant Secretary of the Navy (Research, Development & Acquisition), Ships, response to researcher's survey questions, May 7, 1999.
34. Sanford, James, Northrop Grumman, Vice President of Corporate Contracts, Interview granted May 2, 1999.
35. Gordon, Harvey, Lockheed Martin Corporation, Director of Government Contracting Policy, response to researcher's survey questions, April 30, 1999.
36. Losey, Frank, American Shipbuilding Association, response to researcher's survey questions, May 13, 1999.
37. Rossi, Art, Raytheon Systems Company, Director of Contract Administration, response to researcher's survey questions, May 17, 1999.
38. Dudley, Michael J., Defense Contract Management Command, Lockheed Martin Missiles and Space, Sunnyvale. CA., Interview granted May 14, 1999.
39. Palochak, John B., Lockheed Martin Missiles and Space, Division Counsel, Interview granted May 14, 1999.
40. Coyne, Jack, CDR, SC, USN, Assistant Secretary of the Navy (Research, Development & Acquisition), response to researcher's survey questions, May 17, 1999.
41. Snodgrass, Kevin, Lockheed Martin Missiles and Space, Contract Manager, Interview granted May 14, 1999.
42. Fisher, Christine, Office of the Undersecretary of Defense (Acquisition & Technology), Deputy Director, Industrial Capabilities and Assessments, Interview granted May 11, 1999.
43. DeMayo, Peter, Lockheed Martin Corporation, Vice-President of Contract Policy, Interview granted, April 30, 1999.

44. Hulett, David, Lockheed Martin Missiles and Space, Director, Contract Compliance, Interview granted May 14, 1999.
45. Christenson, David M., Lockheed Martin Corporation, Vice President and Associate General Counsel, response to researcher's survey questions, May 4, 1999.
46. Nagle, James, Oles, Morrison, Rinker & Baker LLP, Attorney, Interview granted, May 6, 1999.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center.....2
8725 John J. Kingman Road, Ste 0944
Ft. Belvoir, CA 22060-6218
2. Dudley Knox Library.....2
Naval Postgraduate School
411 Dyer Rd.
Monterey, CA 93943-5101
3. Dr. David V. Lamm.....5
Department of Systems Management Code SM/Lt
Naval Postgraduate School
Monterey, CA 93943-5101
4. CDR Jeffrey R. Cuskey, SC, USN.....1
Department of Systems Management Code SM/Ck
Naval Postgraduate School
Monterey, CA 93943-5101
5. LCDR Robert R. Main, SC, USN.....2
430 Ontario St.
Storm Lake, IA 50588